

**510(k) Summary for Levitronix CentriMag Back-Up Console**

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the Safe Medical Devices Act (SMDA) of 1990 and Title 21 of the Code of Federal Regulations, Part 807, and in particular §807.92.

**A. Application Information:**

Date Prepared: December 30, 2008

Submitter's Name & Address: Levitronix LLC  
45 First Avenue  
Waltham, MA 02451

Contact Person: Susan K. Hamann  
Regulatory Affairs Manager  
Ph: (781) 466-6553  
Fax: (781) 622-5090  
e-mail: [shamann@levitronix.com](mailto:shamann@levitronix.com)

**B. Device Information:**

Trade or Proprietary Name: Levitronix CentriMag® Back-Up Console

Common or Usual Name: Cardiopulmonary Bypass Pump  
Console

Classification Name: Class II, DWA, 21 CFR – 870.4380  
Control, Pump Speed, Cardiopulmonary  
Bypass

Performance Standard: Performance standards do not currently  
exist for these devices. None  
established under section 514 of the  
Food, Drug and Cosmetic Act.

**C. Predicate Device:**

Levitronix CentriMag Back-Up Console Software Version 1.01 – 510(k)  
(K051209)

#### **D. Device Description**

The CentriMag Back-Up Console is a microprocessor-based device. The microprocessor generates the primary Motor control signal, monitors system sensors, generates front display outputs, and provides alarm functions. The microprocessor acquires the sensor data for use in generating operator displays and alarms. An alphanumeric screen is used to display monitored data.

#### **E. Intended Use**

The Levitronix CentriMag Back-Up Console is indicated for use with the Levitronix CentriMag Extracorporeal Blood Pumping System. The Levitronix CentriMag Extracorporeal Blood Pumping System is indicated to pump blood through the extracorporeal bypass circuit for extracorporeal circulatory support for periods appropriate to cardiopulmonary bypass (up to six hours). It is also indicated for use in extracorporeal circulatory support systems (for periods up to six hours) not requiring complete cardiopulmonary bypass (e.g., valvuloplasty, circulatory support during mitral valve reoperation, surgery of the vena cava or aorta, liver transplants etc).

#### **F. Technological Characteristics**

The Levitronix CentriMag Back-Up Console has technological characteristics similar to the predicate device.

The CentriMag Back-Up Console is a microprocessor-based device. The microprocessor generates the primary Motor control signal, monitors system sensors, generates front display outputs, and provides alarm functions. The microprocessor acquires the sensor data for use in generating operator displays and alarms. An alphanumeric screen is used to display monitored data.

Identical to the predicate device, the Back-Up Console uses single phase AC power and is capable of controlling the Motor and Pump to produce a flow rate of up to 9.9 LPM at maximum pressure head of 600 mmHg when used with the CentriMag Blood Pump. Each Back-Up Console contains a non-rechargeable, field replaceable internal battery that is capable of powering the Back-Up Console in the event of a loss of AC Power.

#### **G. Comparison to Predicate Device**

The Levitronix CentriMag Back-Up Console has indications for use which is substantially equivalent to the predicate device, is composed of the same or equivalent materials as the predicate device, has equivalent

design features as the predicate device, and has functional characteristics which are the same or equivalent to those of the predicate device. Due to the equivalency of indications for use, materials of composition, design features, and functional characteristics, the device raises no new safety or effectiveness issues.

#### H. Summary of Performance Data

The performance characteristics of the Levitonix CentriMag Back-Up Console were tested and compared with Levitonix performance specifications established for the device and with the commercially available predicate device.



## DEPARTMENT OF HEALTH &amp; HUMAN SERVICES

Public Health Service

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

JAN 15 2009

Levitronix LLC  
c/o Susan Hamann  
Regulatory Affairs Manager  
45 First Avenue  
Waltham, MA 02451

Re: K090004

Levitronix CentriMag Backup Console  
Regulation Number: 21 CFR 870.4380  
Regulation Name: Cardiopulmonary Bypass Pump Speed Control  
Regulatory Class: Class II  
Product Code: DWA  
Dated: December 30, 2008  
Received: January 2, 2009

Dear Ms. Hamann:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Page 2 – Ms. Susan Hamann

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050. This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Center for Devices and Radiological Health's (CDRH's) Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometrics' (OSB's) Division of Postmarket Surveillance at 240-276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at 240-276-3464. You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,

*Bram D. Zuckerman*

 Bram D. Zuckerman, M.D.  
Director  
Division of Cardiovascular Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

## Attachment 1 – Indications for Use Statement

Applicant: **Levitronix LLC**

510(k) Number (if known): K090004

Device Name: **CentriMag® Back-Up Console (with V2.00 Application Software)**

### Indications for Use:

The Levitronix CentriMag Back-Up Console is indicated for use with the Levitronix CentriMag Extracorporeal Blood Pumping System. The Levitronix CentriMag Extracorporeal Blood Pumping System is indicated to pump blood through the extracorporeal bypass circuit for extracorporeal circulatory support for periods appropriate to cardiopulmonary bypass (up to six hours). It is also indicated for use in extracorporeal circulatory support systems (for periods up to six hours) not requiring complete cardiopulmonary bypass (e.g., valvuloplasty, circulatory support during mitral valve reoperation, surgery of the vena cava or aorta, liver transplants etc).

Prescription Use X AND/OR Over-The-Counter Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D) (21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

---

Concurrence of CDRH, Office of Device Evaluation (ODE)

Donna R. Walker  
(Division Sign-Off)  
Division of Cardiovascular Devices

510(k) Number K090004

Page 1 of 1